REMARKS

Claims 1 – 25 are now pending in the application. Minor amendments have been made to the claims to place them in more traditional U.S. format. The amendments contained herein are not narrowing amendments. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 1 – 25 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Takahashi et al. (U.S. Pat. No. 6,266,119). This rejection is respectfully traversed. Although claim 2 was not specifically rejected in the office action, claim 2 is treated as being rejected for the same reasons as set forth with respect to claims 14 and 15.

Claim 1 calls for connecting a first terminal bank formed on the surface of a substrate to a second terminal bank formed on the surface of a mount base member. The second terminal bank is at a pitch which is different from a pitch of the first terminal bank when the substrate is bonded to the mount base member. When the substrate and the mount base member are deformed during bonding, the pitch of the first terminal bank and the pitch of the second terminal bank become substantially equal.

Claim 9 calls for fabricating a second terminal bank at a pitch different from a pitch of a first terminal bank and connecting the first terminal bank and the second terminal bank. During a bonding step, deformation causes the pitch of the first terminal bank and the pitch of the second terminal bank to become substantially equal.

In contrast, Takahashi discloses at column 2, lines 29-40, the following:

> For example, when a flexible printed circuit (FPC) board (referred to as "FPC") is liable to cause a dimensional change of its base film due to, e.g., heat treatment during the production of the FPC, thus resulting in a dimensional error (tolerance) a to a dimensional accuracy of an electrode pattern. The dimensional error of the electrode pattern on the FPC is larger than that on the glass substrate 22 and is generally ca. ± 0.1%. Even when the dimensional error is decreased by finely adjusting a size of a mask used in the electrode pattern formation, the resultant dimensional error is ca. ± 0.05%.

The disclosure of "finely adjusting a size of a mask used in the electrode pattern formation" is insufficient to anticipate the method of the claimed invention. A claim is anticipated only if each and every element as set forth in the claim is found in the prior art reference. The identical invention must be shown in as complete detail as is contained in the claim.

Takahashi teaches decreasing dimensional error by finely adjusting a size of a mask used in the electrode pattern formation. Takahashi is completely silent with respect to the nature of the disclosed "finely adjusting" step. Takahashi is also completely silent with respect to the resulting pitch pattern. It is improper to read Takahashi as disclosing more than that which is actually disclosed.

Claims 1 and 9 call for the second pitch to be different from the first pitch prior to bonding and for the second pitch to be substantially equal to the first pitch after boding. Takahashi discloses dimensional accuracy problems in electrode patterns. Takahashi defines these dimensional accuracy problems in terms of a dimensional error percentage. For example, Takahashi states that a dimensional error of an FPC is 0.1%.

Takahashi then discloses that such dimensional errors can be decreased by finely adjusting a mask used in an electrode pattern formation process.

Takahashi does not teach whether the finely adjusted electrode pattern is selected such that the pitch of a second electrode bank is different from the pitch of a first electrode bank before bonding. Takahashi does not teach whether the finely adjusted electrode pattern is selected such that the pitch of a second electrode bank becomes substantially equal to the pitch of a first electrode bank after deformation during a bonding process. In fact, Takahashi is completely silent with respect to whether the finely adjusting step has any impact whatsoever with respect to the relative pitch of two opposing electrode banks. Takahashi merely discloses that the "dimensional error" (which is not defined) can be decreased by "finely adjusting" (which is not defined) a mask.

In column 2, lines 41-62, Takahashi teaches the measured effect of a 0.1% dimensional error in an FPC. Takahashi also teaches the numerical effect of a 0.1% dimensional error in panel side electrodes. From a comparison of the two numerical effects, it can be concluded that Takahashi teaches that an electrode pattern on an FPC will change more than an electrode pattern on a glass substrate during similar processing. However, Takahashi does not disclose selecting pitch patterns on the respective substrates which will ensure proper alignment of the electrodes relative to one another after deformation of the substrates during a bonding process. In fact, Takahashi discloses that even with the numerical effect of each dimensional error known, it is difficult to perform positional alignment. This clearly indicates that

Takahashi fails to appreciate pre-selecting pitch differences for the respective substrates which result in proper alignment of the electrodes after processing.

Takahashi also teaches directly away from the claimed method. Takahashi discloses a connection sheet 37 disposed between electrodes 36a and 35a. Column 5, lines 1-11. Such a connection sheet 37 is unnecessary in the present invention. The claimed pre-processing alignment mismatch between the electrodes is selected to ensure accurate alignment after processing.

With respect to claim 12, the pitch of the second terminal bank is a/b times the pitch of the first terminal bank. The first terminal bank expands in width in the transverse direction thereof on the base member by a times and the second terminal bank expands in width in the transverse direction thereof on the mount base member by b times.

Takahashi discloses one dimensional error for the FPC. Takahashi discloses another dimensional error for the glass substrate. Takahashi is completely silent with respect to the pitch ratio as claimed. Takashi does not define the dimensional error in terms of a ratio between the two substrates. Takahashi fails to teach a dimensional error which is a relative value accounting for the differences between the electrode patterns formed on two opposing substrates.

Claim 24 calls for a pitch of the second terminal bank prior to thermal compression bonding being a/b times the pitch of the first terminal bank. Subsequent to the thermal compression bonding, the first terminal bank expands in width in the transverse direction thereof on the substrate by a times and the second terminal bank expands in width in the transverse direction thereof on the mount base member by b

times. Takahashi is completely silent with respect to the ratio of pitch differences before and after thermal compression bonding.

Claim 25 calls for the pitch of the second terminal bank prior to thermal compression bonding being 1/b times the pitch of the first terminal bank. Subsequent to the thermal compression bonding of the mount base member to the substrate, the second terminal bank expands in width in the transverse direction thereof on the mount base member by b times. Takahashi is completely silent with respect to the relative pitch of the first and second terminal banks before and after thermal compression bonding as claimed.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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ATTACHMENT FOR CLAIM AMENDMENTS

The following is a marked up version of each amended claim in which underlines indicates insertions and brackets indicate deletions.

1. (Amended) A manufacturing method for manufacturing an electro-optical device having an electro-optical panel with a substrate holding an electro-optical material and a mount base member bonded to the substrate, the manufacturing method comprising:

a step of connecting a first terminal bank, formed on the surface of the substrate, to a second terminal bank formed on the surface of the mount base member, the second terminal bank being at a pitch different from a pitch of the first terminal bank when the substrate is bonded to the mount base member,

wherein the connection step connects the first terminal bank and the second terminal bank[, both of which] such that the pitch of the first terminal bank and the pitch of the second terminal bank become substantially equal to each other [in pitch] when the substrate and the mount base member are deformed during the bonding of the substrate and the mount base member.

9. A terminal connection method for connecting a first terminal bank formed on the surface of a first base member to a second terminal bank formed on the surface of a second base member, the connection method comprising the steps of:

fabricating the second terminal bank at a pitch different from a pitch of the first terminal bank; [and]

connecting the first terminal bank and the second terminal bank;[,]

bonding the first base member to the second base member; and

during the bonding step, deforming the first base member and the second base member such that the pitch of the first terminal bank and the pitch of the second terminal bank [both of which] become substantially equal [to each other in pitch when the first base member and the second base member are deformed during the bonding of the first base member to the second base member].

12. A manufacturing method for manufacturing a mount base member having a second terminal bank to be connected to a first terminal bank formed on a base member and being thermal-compression bonded to the base member, the manufacturing method comprising:

the step of forming the second terminal bank in such a manner that the pitch of the second terminal bank is a/b times the pitch of the first terminal bank;[, when,]

wherein subsequent to the thermal compression bonding of the mount base member to the base member, the first terminal bank expands in width in the transverse direction thereof on the base member by a times and the second terminal bank expands in width in the transverse direction thereof on the mount base member by b times.

24. A mount base member to be thermal compression bonded to a substrate of an electro-optical panel, the mount base member comprising:

a second terminal bank to be connected to a first terminal bank formed on the substrate,

wherein the pitch of the second terminal bank prior to the thermal compression bonding is a/b times the pitch of the first terminal bank; and[, when,]

wherein subsequent to the thermal compression bonding of the mount base member to the substrate, the first terminal bank expands in width in the transverse

direction thereof on the substrate by a times and the second terminal bank expands in width in the transverse direction thereof on the mount base member by b times.

25. A mount base member to be thermal compression bonded to a substrate of an electro-optical panel, the mount base member comprising;

a second terminal bank to be connected to a first terminal bank formed on the substrate,

wherein the pitch of the second terminal bank prior to the thermal compression bonding is 1/b times the pitch of the first terminal bank; and[, when,]

wherein subsequent to the thermal compression bonding of the mount base member to the substrate, the second terminal bank expands in width in the transverse direction thereof on the mount base member by b times.